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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/677,808

10/01/2003

Bansidhar Jagannath Phansalkar

133482

9786

7590

01/19/2005

General Electric Company
CRD Patent Docket Rm 4A59
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EXAMINER

ASSOUAD, PATRICK J

ART UNIT

PAPER NUMBER

2857

DATE MAILED: 01/19/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/677,808

Applicant(s)

PHANSALKAR ET AL.

Examiner

Patrick J. Assouad

Art Unit

2857

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 2 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☒ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1,2 and 4-19 is/are allowed.
- 6) ☐ Claim(s) _____ is/are rejected.
- 7) ☒ Claim(s) 3 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>10/1/03</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

1. Claim 3 is objected to because of the following informalities: the reference numeral (52) -- which is shown in Applicant's Fig. 4 -- is referred to in this dependent claim; however, in no other pending claims, including the parent claim, independent claim 1, do we see any reference to any reference numerals. It is suggested that either all claims include the appropriate reference numerals or this reference numeral (52) be deleted from the claim. Appropriate correction is required.

Allowable Subject Matter

2. Claims 1-19 are allowable over the prior art of record. The following is a statement of reasons for the indication of allowable subject matter. The Examiner first notes that all pending claims refer to "connectivity" of a battery. A reasonable interpretation and definition of the term "connectivity" is found in the Merriam-Webster online dictionary: **con·nec·tiv·i·ty**: the quality or state of being connective or connected <connectivity of a surface>; *especially* : the ability to connect to or communicate with another computer or computer system. And from Applicant's instant Specification, particularly, pg. 2, lines 4-5, we see the clear association of "connectivity" with "presence of the battery bank."

3. Using either interpretation or definition, the prior art of record does not suggest or disclose the claimed combination of method steps or system elements of independent claims 1, 6, 9, 15 or 17.

4. The closest prior art of record is Laig-Hoerstebroek et al. (US 2004/0095143 A1).
Laig-Hoerstebroek et al. disclose:

A method for determining the amount of charge which can be drawn from a storage battery includes determining a response signal profile within a time interval to an electrical stimulus to the storage battery. The method also includes linearizing the response signal profile and determining the amount of charge which can be drawn as a function of a degree of change of the linearized response signal profile in the time interval. A monitoring device for a storage battery is provided that includes measurement means for measuring at least one of voltage and current of the storage battery over time intervals. The monitoring device also includes evaluations means that are designed for carrying out the method. [emphasis added]

5. Note that the “electrical stimulus” of Laig-Hoerstebroek et al. comprises the application of “current pulses and/or voltage pulses.” (emphasis added) See col. 2, para. 26. Indeed, “the response signal profile is preferably a voltage response to a pulsed current stimulus to the storage battery, but may also be a current response to pulsed voltage excitation.” See col. 2, para. 28. Also see claims 1 and 4 of Laig-Hoerstebroek et al.

6. There are several differences between the instant claimed invention (independent claims 1,6,9,15, and 17) and that of Laig-Hoerstebroek et al. The instant

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claimed invention refers specifically to a "battery bus voltage." There is no battery bus or battery bus voltage in Laig-Hoerstebroek et al. because there is only a discussion of a single battery; there is no discussion of a string of batteries, a plurality of battery cells or battery banks. In addition, the instant claimed invention refers specifically to battery "connectivity." In Laig-Hoerstebroek et al., there is no discussion of testing battery "connectivity," or conducting a "connectivity" test -- as interpreted above -- whatsoever. Finally, the instant claimed invention refers to a single "step increase in a battery bus voltage" and/or a single "current pulse obtained by the connectivity test." Laig-Hoerstebroek et al. appear to "determine the amount of charge which can be drawn from a battery" based on a plurality of pulses or a sequence of current or voltage pulses as generated by a "function generator." See at least para. 0026 or 0032 of col. 2 or para. 0067 of col. 5 of Laig-Hoerstebroek et al.

7. As allowable subject matter has been indicated, applicant's reply must either comply with all formal requirements or specifically traverse each requirement not complied with. See 37 CFR 1.111(b) and MPEP § 707.07(a).

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. See the attached PTO-892.

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9. This application is in condition for allowance except for the following formal matters:

See above.

Prosecution on the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

A shortened statutory period for reply to this action is set to expire **TWO MONTHS** from the mailing date of this letter.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Patrick J. Assouad whose telephone number is 571-272-2210. The examiner can normally be reached on Tuesday-Friday, 6:30am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marc Hoff can be reached on 571-272-2216. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Patrick J Assouad
Primary Examiner
Art Unit 2857

pja